



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

D119-796-151
Job Sheet 177100



Part No: D119-796-151

Job Qty: 1 ea

Part Name: Fwd Crosstube Installation With Step (No Hardware)



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 5/7/18

Job Tracking No:

Due Date: 5/25/18

Created By: Marie Lajeunesse

Type: Stock

Description:

Note: DWG D119-796-151 REV E, IIN-D119-796 REV F IPP REV:A 14.09.09 NEW ISSUE DD VERF:JLM IPP
REV:B 14.11.19 AS PER REV:C DD VERF:JLM IPP REV:C 14.12.09 AS PER REV:PC6 DD VERF:JLM IPP
REV:D 15-02-11 AS PER REV D JLM VERIFIED BY:DD IPP REV:E 17.12.11 REMOVE PICK KIT DD
VERF:DP

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	1 Ea	5/25/18	5/25/18	0.00	0.00	Start Up Crosstubes-1		AB JUN 02 2018
130	Crosstubes	1 pcs	5/25/18	5/25/18	0.00	0.49	Crosstubes-1		JMB 02/06/2018
140	QC	1 pcs	5/25/18	5/25/18	0.00	0.00	QC5		
145	DC	1 pcs	5/25/18	5/25/18	0.00	0.00	DC		
150	Packaging	1 pcs	5/25/18	5/25/18	0.00	0.00	Packaging3-1	LG050	AB JUN 02 2018
160	QC21-FG	1 Ea	5/25/18	5/25/18	0.00	0.00	QC21	21	JUN 02 2018

Part Op 130 - 1- Install step and clamp with the proper position per dwg D119-796-151 ***Torque all clamps to 50 IN-LBS max.***
Descriptions: 140 - ***RE-CHECK TORCQUE ON CLAMP AS PER DWG.***

145 - Photocopy bluefile and create labels as per PPP D119-796-151 chg 005

150 - Identify and pack for shipping as per PPP D119-796-151

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D119-796-141	Fwd Crosstube Installation Without Step (No Hardware)	1 Ea (1 ea)	90-Start up Operation	
D5123-3	Clamp Cushion	4 Ea (4 ea)	90-Start up Operation	
D5149-041	Fwd Step Base Assembly	2 Ea (2 ea)	90-Start up Operation	
MS21920-22	Clamp	4 Ea (4 ea)	90-Start up Operation	

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	D119-796-141	①	8	0
	D5123-3	④	294	0
	D5149-041	②	17	0
	MS21920-22	④	53	0



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Hawkesbury, ON K6A 1K7
CANADA
TEL.: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Container No: S077462



Part: D119-796-151

Job No: 177100

Serial No/Batch: S077462

Revision: E/F

Inspector:

Exp Date: 06/04/2018

'18 6:52 AM Dart.lajeunesse.marie

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

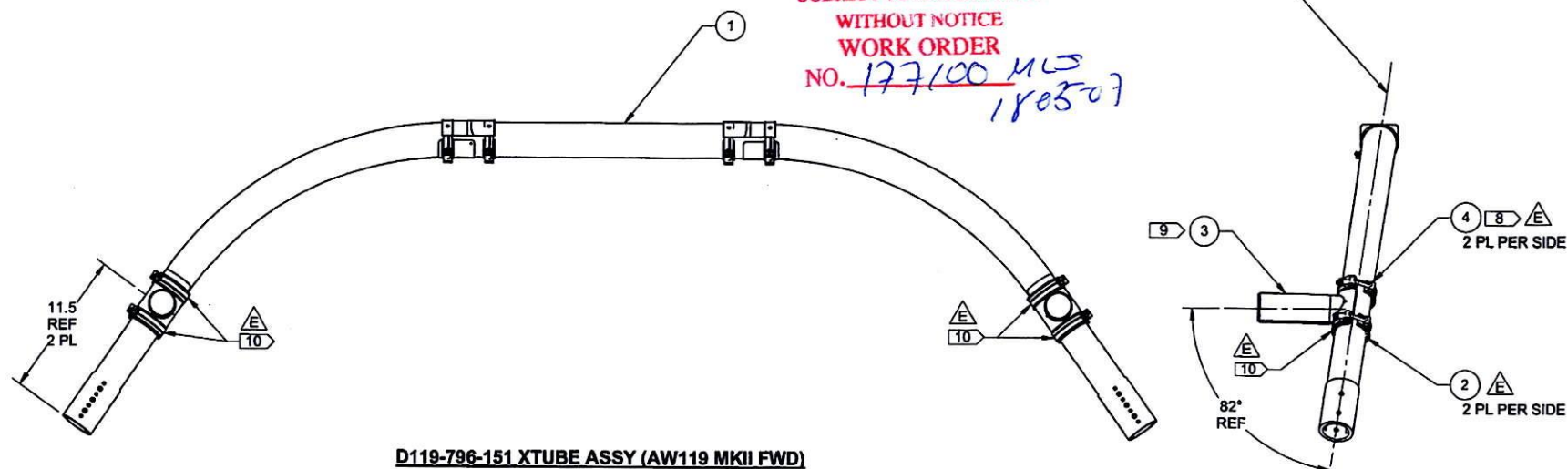
Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																											
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																																																								
Description Work Order Deviation				Disposition				Completed By																																																							
								Lead hand / Supervisor Approval Verification																																																							
								QC / QA Coordinator Approval																																																							
Root Cause		FAULT CATEGORY																																																													
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER :	
Misidentified ☐	Past Due ☐																																																														

ITEM	QTY	P/N	DESCRIPTION
	X	D119-796-151	XTUBE ASSY (AW119 MKII FWD)
1	1	D119-796-141	XTUBE ASSY (AW119 MKII FWD)
2	4	D5123-3	CUSHION
3	2	D5149-041	FWD STEP ASSEMBLY
4	4	MS21920-22	CLAMP

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 177100 ML
180507

D119-796-141 XTUBE
BENDING PLANE



D119-796-151 XTUBE ASSY (AW119 MKII FWD)

NOTES:

- 1) MATERIAL: N/A
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: N/A
 - 6) IDENTIFICATION: IDENTIFY PER DART QSI 044 METHOD 6.5
 - 7) WEIGHT: 20.01 lbs
 - 8) TORQUE MS21920-22 CLAMPS TO 50 IN-LBS MAX
 - 9) LOCATE STEP USING POST FITTING ON CROSSTUBE
 - 10) POSITION MS21920 CLAMPS SECURING THE STEPS AS SHOWN.
- THE THREADED PORTION OF THE CLAMP MUST FACE THE SAME DIRECTION AS THE STEP

E	MODIFY CLAMP ORIENTATION, ADD NOTE 10 (PAR16-527) UPDATE WEIGHT DUE TO -141 CHANGE	ML	17.02.10
D	D5123-3 CLAMP CUSHION WAS D5123-9 CLAMP CUSHION, MS21920-22 WAS -24.	AP	15.01.19
C	RE-DESIGN STEP INSTALLATION	DB	14.11.24
B	D5149-043 WAS D5149-041, AN4C8A WAS AN4C10A, D2274 WAS D5153-1	AP	14.11.04
A	NEW ISSUE	AP	14.09.03
REV.	DESCRIPTION	BY	DATE

DESIGN	AP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	ML		
CHECKED	AJS	DRAWING NO.	REV. E
MFG. APPR.	DP	D119-796-151	SHEET 1 OF 1
APPROVED	WM	TITLE	SCALE
DE APPR.	DS	XTUBE ASSY (AW119 MKII FWD)	NTS
DATE	17.02.10	COPYRIGHT © 2014 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	

RELEASED
2017-05-04
ECN 17-538

APPROVED

DQA: _____ Date: _____



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Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																											
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